

Application No. 10/657,950
Communication and Amendment

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-24. (Canceled)

25. (Original) A process for making a propylene stream and a propane stream from an oxygenate feed stream comprising the steps of:

(a) contacting an oxygenate feed stream with a molecular sieve catalyst under conditions sufficient to make a first stream, the first stream comprises, propylene, propane and dimethyl ether;

(b) separating at least a majority of propane in the first stream from propylene in the first stream to form a propylene product stream; and

(c) adsorbing dimethyl ether from propane with a crystalline microporous material that preferentially adsorbs dimethyl ether over propane to form a propane stream.

26. (Original) The process of claim 25, further comprising the step of desorbing the dimethyl ether from the adsorbent bed.

27. (Original) The process of claim 26, wherein the steps of adsorbing and desorbing are in a kinetic-based pressure and/or temperature swing adsorption process.

Application No. 10/657,950
Communication and Amendment

28. (Original) The process of claim 27, wherein the crystalline microporous material preferentially adsorbs dimethyl ether within an adsorption time of about 120 seconds or less.
29. (Original) The process of claim 28, wherein the adsorption time is about 90 seconds or less.
30. (Original) The process of claim 28, wherein the adsorption time is about 60 seconds or less.
31. (Original) The process of claim 25, wherein the step of (c) adsorbing occurs within a temperature ranging from about 273K to about 523K.
32. (Original) The process of claim 25, wherein the step (c) of adsorbing occurs within a pressure ranging from about 100 kPa to about 2000 kPa.
33. (Original) The process of claim 25, wherein the first stream is in a vapor phase during the step (c) of adsorbing.
34. (Original) The process of claim 25, wherein the first stream further comprises C4+ hydrocarbons.
35. (Original) The process of claim 25, wherein the crystalline microporous material has a system of three interconnecting 8-membered ring channels.
36. (Original) The process of claim 25, wherein the first stream comprises methanol during the step (b) of separating.

USPTO 6/17/2005 6:49 AM PAGE 6/008 Fax Server
TO:official fax COMPANY: 2818347413 P.05
JUN-16-2005 00:59 EXXONMOBIL

Application No. 10/657,950
Communication and Amendment

37. (Original) The process of claim 36, wherein the first stream comprises water during the step (b) of separating.

38 - 75. (Canceled)

Page 4 of 5

J:\BPC\Law\Prosecution\EMCC Prosecution\2003\2003B091\2003B091.US\2003B091.US - 2005June14 - Communication and Amendment.doc

PAGE 6/8 * RCVD AT 6/17/2005 6:49:00 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/24 * DNIS:2738300 * CSID:USPTO * DURATION (mm:ss):02:44 148